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Technology Center 2600 Docket No. Form PTO 1449 Serial No. (Rev. 2-32) CLRV-003 10/051,612 U.S. Department of Commerce Patent and Trademark Office Information Disclosure Statement by Applicant Applicant: Elliott et al. (Use several sheets if necessary) Filed: January 16, 2002 Group: 2673 U.S. Patent Documents Document No. Date Name Class Subclass Filing Date Init. 07/20/1976 358 41 03/05/1975 AC 3,971,065 Bayer 1 Acc Plummer et al. 358 44 02/02/1987 2 4,786,964 11/22/1988 335 ALC. 350 06/20/1988 12/12/1989 Johnson 3 4,886,343 A.C 04/24/1990 358 56 06/20/1988 4,920,409 Yamagishi 4 A.c. 10/30/1990 Parulski et al. 358 44 05/30/1989 5 4,967,264 66 359 06/08/1989 05/12/1992 Takahashi et al. 6 5,113,274 359 41 06/17/1992 7 5,315,418 05/24/1994 Sprague et al. 345 152 10/23/1990 Tanigaki et al. AC 5,334,996 08/02/1994 8 345 152 06/13/1988 A.C. 5,341,153 08/23/1994 Benzschawel et al. 393 07/27/1993 03/14/1995 Martinez-Uriegas et al. 348 A.C -5,398,066 10 348 264 03/10/1995 5,541,653 07/30/1996 Peters et al. A.C. 11 348 06/02/1994 A.C 10/01/1996 Katoh et al. 219 5,561,460 96 345 01/08/1992 1,0. 07/15/1997 Chen 13 5,648,793 348 219 12/19/1995 Yamada et al. A.C 5,754,226 05/19/1998 14 348 790 03/13/1995 12/28/1999 Silverbrook 6,008,868 A.c 15 345 98 03/16/1998 05/16/2000 Kwon 6,064,363 16 153 01/16/1998 345 Park 6,160,535 12/12/2000 17 10/07/1998 345 136 Hill et al. lıc. 02/13/2001 18 6,188,385 **Foreign Documents** Translation Class Subclass Yes No Country Date Init. Document No. HO4N 9/30 X 19 EP 0 671 650 09/13/1995 Europe X 11/18/1998 602F T/T343 Europe 20 EP 0 878 969 3/20 -X--G09G DE 199 23 527 21 11/23/2000 Germany Date Considered Examiner Examiner: Initial if citation considered, whether or not citation is in conference with MPEP 609; Draw line through citation if not conformance and not considered. Include a copy of this form with the next communication to applicant.

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Form PTO 1449	' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	Atty. Docket No.	Serial No.			
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	Patent and Trademark Office	·	,			
Info	ormation Disclosure Statement by Applicant	Applicant:				
		Elliott et al.				
	(Use several sheets if necessary)	Filed: January 16, 2002 Group: 2673				
	Other Documents (Including Author, Title, I	Date, Pertinent Pages, etc.)				
22	R. Martin et al., "Detectability of reduced blue pixel cou					
	Society for Information Display Symposium Digest, pp.	606-609, May 1993.	3			
23	C. Elliott, "Reducing Pixel Count without Reducing Ima	an Ousline Information D	icelas Val 16 ca 22			
23	25, December 1999.	ige Quarty, intomation D	<u>18p1ay,</u> voi. 13, pp. 22-			
24	24 C. Elliott, "Active Matrix Display Layout Optimization for Sub-pixel Image Rendering", IDMC 2000,					
24		ior Suo-pixer miage Keilder	ing , <u>myrc 2000,</u>			
25	pp. 185-189, August 2000. H. Okumura et al., "A New Flicker-Reduction Drive Me	whad for High Desolution I	CTVe" SID '01 Digget			
25	pp. 551-554, 2001 (no month)	culou for riigh-Resolution L	CIVS, SID VI DIBESI,			
	C. Elliott, "New Pixel Layout for PenTile Matrix", IDM	C 2002 pp. 115 117 Janua	-, 2002			
26	C. Emott, New Pixer Layout for Pentile Madix, 1000	<u>C 2002</u> , pp. 113-117, Janua	Ty 2002.			
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Examiner	11/1	Date Considere	ed Shela			
	me C		102/02			
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not conformance and not considered. Include a copy of this form with the next communication to applicant.





INFORMATION DISCLOSURE CITATION

Atty. Docket No.	8831.0003	Appln. No.	10/051,612	RECEIVED
Applicant	CANDICE HELLEN BROWN ELLIOTT	et al.		007 1 5 9009
Filing Date	January 16, 2002	Group:	2673	OCT 1 5 2002
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			U.S. PATE	NT DOCUMENTS		nology Cent	
Examiner Initial*		ocument lumber	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate
A.c.	4,	751,535	Jun 14, 1988	Myers	/		
A.C.	4,9	966,441	Oct 30, 1990	Conner		_	
Ail	5,	792,579	Aug 11, 1998	Phillips			
A.e.	5,9	949,496	Sep 7, 1999	Kim		^	
Acci	5,9	973,664	Oct 26, 1999	Badger		_	
A.C.	6,	034,666	Mar 7, 2000	Kanai et al.	_	-	
PE AC.	6,	061,533	May 9, 2000	Kajiwara		,	
), W. &		108,122	Aug 22, 2000	Ulrich et al.			
on 1/2 . 3	6,	144,352	Nov 7, 2000	Matsuda et al.			
A .>-	6,	271,891 B1	Aug 7, 2001	Ogawa et al.		•	
Arm Acar	6,3	299,329 B1	Oct 9, 2001	Mui et al.	_		
A.c.	6,	377,262 B1	Apr 23, 2002	Hitchcock et al.			

		FOREIGN PATEN	IT DOCUMENTS	3		
	Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
Adobe Systems, Inc., website, 2002, http://www.adobe.com/products/acrobat/cooltype.html.
Betrisey, C., et al., "Displaced Filtering for Patterned Displays," 2000, Society for Information Display (SID) 00 Digest, pp. 296-299.
Gervajal, D., "Big Publishers Looking Into Digital Books," April 3, 2000, The New York Times, Business/Financial Desk.
Gibson Research Corporation, website, "Sub-Pixel Font Rendering Technology, How It Works," 2002, http://www.grc.com/ctwhat.html.
Microsoft Corporation, website, 2002, http://www.microsoft.com/reader/ppc/product/cleartype.html.



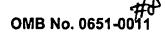
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Atty. Docket No.	8831.0003	Appln. No. 10/051,61	² RECEIVED	
Applicant	CANDICE HELLEN BROWN ELLIOT	T et al.	OCT 1 5 2002	
Filing Date	January 16, 2002	Group: 2673	001 3 0 2002	
			Technology Center 2600	
	OTHER DOCUMENTS (Including A	Author, Title, Date, Pertine	nt Pages, Etc.)	
	- Microsoft-Press-Release, Novembe Breakthrough at COMDEX/Fall '98,		arch Announces Screen Display	
	Murch, M., "Visual-Perception Basic	s," 1987, <u>SID</u> , Seminar 2, T	ektronix, Inc., Beaverton, Oregon.	
	Wandell, Brian A., Stanford Univers Computation," June 12, 1994, Socie Hotel, San Jose, California.			
	U.S. Patent Application Publication	No. US 2002/0015110 A1, F	February 7, 2002, Brown Elliott.	
Examiner	let Cl	Date Considered 2	8/21/05	
th	itial if reference considered, whether or trough citation if not in conformance and ommunication to applicant.			
Form PTO 1449 Patent and Trademark Office - U.S. Department of Comme				







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Atty. Docket No.	8831.0003	Appln. No.	10/051,612	LILUEIVED
Applicant	Candice Hellen Brown Elliott, et al.			APR 0 3 2003
Filing Date	January 16, 2002	Group:	2673	Technology Center 2600

	U.S. PATENT DOCUMENTS					
Examiner Initial*	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate
Arc.	4,353,062	Oct 5, 1982	Lorteije et al.	<i></i>	-	•
Se	4,642,619	Feb 10, 1987	Togashi		7	
A.C.	4,792,728	Dec 20, 1988	Chang et al.			
Acc.	5,113,274	May 12, 1992	Takahashi et al.			
Acc.	6,002,446	Dec 14, 1999	Eglit		_	
A.c.	6,198,507 B1	Mar 6, 2001	Ishìgami	,	_	
A.C.	6,327,008 B1	Dec 4, 2001	Fujiyoshi	_	_	
A.c.	6,392,717 B1	May 21, 2002	Kunzman		_	
A.c.	6,453,067 B1	Sep 17, 2002	Morgan et al.			
A.C.	6,466,618 B1	Oct 15, 2002	Messing et al.	_	_	

		FOREIGN PATE	NT DOCUMENTS			
	Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No
	EP 0 158 366 A2	Oct 16, 1985	EPO			
	EP 0.203.005.A1	_Nov.26, 1986	-EPO			Yes, Abstract only
	EP 0 322 106 A2	Jun 28, 1989	_EPO			
	EP 0 812 114 A1	Dec 10, 1997	EPO			
	EP 1 261 014 A2	Nov 27, 2002	EPO			Yes; Abstract only
	-GB-2-133-912 A	Aug 1, 1984	-⊍K			
	-GB-2_1 <u>46_478</u> A	Apr 17, 1985	UK			
	-JP-60=107022	Jun 12, 1985	JP			Yes: Abstract only
	-JP-02-000826 A	_Jan_5,_1990	-JP	-	The second name of the second	Yes; Abstract only
	-JP_03_036239_B	-May-30,-1991	-JP	Stranger Branches		
Andrew State of the State of th	JP 02-983027 B2	Nov 29, 1999_	JP	MICE STATE OF THE		Yes; Abstract-enly
		-Apr-26;-2001	-PCT			
	WO 03/014819 A1	Feb 20, 2003—	-PCT		* Marie 1 2 1 1 2 1 1 1	The state of the s



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OMB No. 0651-0011

RECEIVED

Atty. Docket No.	AND THE STREET, STREET	Appin. No.	10/051,612	NPR N 3 2003
Applicant	Candice Hellen Brown Elliott, et al.			Table 1
Filing Date	January 16, 2002	Group:	2673	rechnology Center 2600

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
Booth, Jr., Lawrence A., "Method and Apparatus for Wide Gamut Multicolor Display," U.S. Patent Application Publication, Publication No. US 2003/0011613 A1, January 16, 2003.
"ClearType magnified," Wired Magazine, November 8, 1999, Microsoft Typography, article posted November 8, 1999, and last updated January 27, 1999, © 1999 Microsoft Corporation, 1 page.
Credelle, Thomas L. et al., "P-00: MTF of High-Resolution PenTile Matrix™ Displays," <u>Eurodisplay</u> 02_Digest, 2002, pages 1-4.
Daly, Scott, "Analysis of Subtriad Addressing Algorithms by Visual System Models," SID Symp. -Digest, June 2001, pages 1200-1203.
Elliott, Candice H. Brown et al., "Color Subpixel Rendering Projectors and Flat Panel Displays," New Initiatives in Metion Imaging, SMPTE Advanced Motion Imaging Conference, February 27- March 1, 2003, Seattle, Washington, pages 1-4.
Elliott_Candice_H_Brown et al., "Co-optimization of Color AMLCD Subpixel Architecture and Rendering Algorithms," SID Symp. Digest, May 2002, pages 172-175.
Feigenblatt, R.I., "Full-color imaging on amplitude-quantized color mosaic displays," SPIE, Vol. 1075, Digital Image Processing Applications, 1989, pages 199-204.
Hayashi, Kenkichi, "Image Signal Processing Device for Minimizing False Signals at Color Boundaries," U.S. Patent Application Publication, Publication No. US 2002/0140831 A1, October 3, 2002.
*Hoelen , Chri stoph-Gerard.August et al., "Light Panel with Enlarged Viewing Window," U.S. Patent Application Publication, Publication No. US 2003/0043567 A1, March 6, 2003.
Johnston, Stuart J. "An Easy Read: Microsoft's ClearType," InformationWeek Online, Redmond, WA, November 23, 1998, 3 pages.
Johnston, Stuart J., "Clarifying ClearType," InformationWeek Online, Redmond, WA, January 4, 1999, 4 pages.
"Just Outta Beta," Wired Magazine, December 1999, Issue 7.12, 3 pages.
-Klompenhouwer; Michiel-A., et al., "Subpixel Image Scaling for Color Matrix Displays," <u>SID Symp.</u> <u>Digest</u> , May 2002, pages 176-179.
Kusunoki, Toshiaki et al., "Display Device Using Thin Film Cathode and Its Process," U.S. Patent -Application-Publication, Publication No. US 2001/0017515 A1, August 30, 2001.
Markoff, John, "Microsoft's Cleartype Sets Off Debate on Originality," The New York Times, December 7, 1998, 5 pages.
"Microsoft-ClearType," http://www.microsoft.com/opentype/cleartype, September 26, 2002, 4 pages.
Platt, John C., "Optimal Filtering for Patterned Displays," Microsoft Research, IEEE Signal Processing Letters, 2000, 4 pages.
Platt, John, "Technical Overview of ClearType Filtering," Microsoft Research, http://research.microsoft.com/users/jplatt/cleartype/default.aspx , September 17, 2002, 3 pages.



OMB No. 0651-0011

RECEIVED

Atty. Docket No.	884 TRACTION	Appln. No.	10/051,612	APR 0.3 2003
Applicant	Candice Hellen Brown Elliott, et al.			Toohnology Contor 0000
Filing Date	January 16, 2002	Group:	2673	Technology Center 2600

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)						
Poor, Alfred, "LCDs: The 800-pound Gorilla," Information Display, September 2002, pages 18-21.						
"Ron Feigenblatt's remarks on Microsoft ClearType™," http://www.geocities.com/SiliconVailey/Ridge/6664/ClearType.html, December 5, 1998, December 7, 1998, December 12, 1999, December 26, 1999, December 30, 1999, and June 19, 2000, 30 pages.						
"Sub-Pixel Font Rendering Technology," © 2003 Gibson Research Corporation, Laguna Hills, CA, 2 pages.						
Werner, Ken, "OLEDs, OLEDs, Everywhere," Information Display, September 2002, pages 12-15.						
Yamazaki, Shunpei, "Semiconductor Device and Manufacturing Method Thereof," U.S. Patent Application Publication, Publication No. US 2001/0040645 A1, November 15, 2001.						
Yamazaki, Shunpei et al., "Electro-Optical Device," U.S. Patent Application Publication, Publication No. US 2002/0017645 A1, February 14, 2002.						

Examiner	TX CL	Date Considered 8/25/05
*Examiner:		whether or not citation is in conformance with MPEP 609; draw line mance and not considered. Include copy of this form with next
Form PTO 14	49 F	Patent and Trademark Office - U.S. Department of Commerce



INFORMATION DISCLOSURE CITATION

2	Atty, Dorket No.	8831.0003	Appln. No.	10/051,612	RECEIVED
	Applicant	Candice Hellen Brown ELLIOTT et al.	•		JUL 1 6 2003
	Filing Date	January 16, 2002	Group:	2673	Technology Center 2600

Examiner Initial*	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate
A.C.	4,593,978	Jun 10, 1986	Mourey et al.	-		
Acco	5,233,385	Aug 3, 1993	Sampsell	-	~	
Acc	5,436,747	Jul 25, 1995	Suzuki			
A.C.	5,815,101	Sep 29, 1998	Fonte			
A.C.	6,225,967 B1	May 1, 2001	Hebiguchi	_		
Ac.	6,360,023 B1	Mar 19, 2002	Betrisey et al.	1	1	
A.c.	6,393,145 B2	May 21, 2002	Betrisey et al.	_	-	
A.c.	6,441,867 B1	Aug 27, 2002	Daly	,	-	· · · · · · · · · · · · · · · · · · ·

			FOREIGN PATE	NT DOCUMEN	TS		
		Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No
		DE 199 23 527 A1	Nov-23, 2000	-Germany		-	Yes, except drawings
	_	DE 199-23-527-A1	-Nov-23,-2000	-Germany			No, includes-drawings
		JP 03-78390	Apr 3, 1991	-Japan		- Carlotte Carlotte	Yes; except-drawings
		-JP-03-78390	-Apr-3, 1991	Japan			No; includes drawings
	-	WO 00/42564	Jul 20, 2000	PCT		almail finance of the Contract	c.
	ec-cu	-WO'00/42762	Jul 20, 2000	-pet	Maria .		
AND TO HAVE THE PROPERTY OF THE PARTY OF THE		-WO-00/45365	-Aug-3, 2000	*PGT	Manager desired and an inches	aliana esta	
	-	-WO-01/10112 A2	Feb 8, 2001	РСТ		_	٠.
promise of the contract	FENC	WO-01/52546*A2***	Jul 19, 2001	-PCT			
WEST TOTAL STREET, ST.	sa:3	-W@·02/059685-A2	-Aug-1, 2002	PCT			

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INFORMATION DISCLOSURE CITATION

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Atty. Decket No.	8831.0003		Appln. No.	10/051,612	F	RECEIVED	
Applicant	Candice Hellen Brown	ELLIOTT et al.	·			JUL 1 6 2003	
Filing Date	January 16, 2002		Group:	2673	Tec	chnology Center 2600	
Ý		FOREIGN PATI	ENT DOCUME	NTS			
	Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No	
			<u></u>				
	OTHER DOCUMEN	TS (Including Au	ithor, Title, Da	ite, Pertiner	t Pages, E	Etc.)	
	Choo, Kyo Seop et al. "Data Wire Device of Pentile Matrix Display Device," U.S. Patent Application Publication, Pub. No.: 2003/0071943 A1, Apr 17, 2003.						
والمرابعة المرابعة ال	Goertzen, Kenbe D., "System and Method for Optimizing Image Resolution Using Pixelated Imaging Device;" U.S. Patent Application Publication, Pub. No.: 2003/0071826 A1, Apr 17, 2003.						
	Kunzman, Adam J., Displays, U.S. Pate						
Series as series and series and series	Lee Baek-woon et al. "40.5L: Late-News Paper: TFT-LCD with RGBW Color System," SID 03 Digest, 2003, pp. 1212-1215.						
the state of the s	Sun, Xiuhong, "Mult Application Publicat					ncement," U.S. Patent	
Examiner	71//	?	Date Consid	ered	8/25/	, , ,	
t	nitial if reference consider through citation if not in communication to application to applications and the second seco	onformance and			e with MPI	EP 609; draw line	
Form PTO 1449			Patent and Tra	demark Offi	ice - U.S. D	Department of Commerce	

OMB No. 0651-0011

INFORMATION DISCLOSURE CITATION

•	IIdi Oklaimiloid I	DISCESSORE	-	SIPE
Atty. Docket No.	8831.0003-00000	Appln. No.	10/051,612	R. P. S.
Applicant	Candice Hellen Brown Elliott et al.			FEB 11 200% y
Filing Date	January 16, 2002	Group:	2673	Fig. 100
				& WYDEND

- U.S. PATENT DOCUMENTS						
Examiner Initial*	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate
A.C.	5,184,114	Feb 2, 1993	Brown	_)	RECEIVE
A.C.	5,189,404	Feb 23, 1993	Masimo et al.		_	FEB 1 2 2004
A.C.	6,346,972 B1	Feb 12, 2002	Kim	_		Technology Center 2

		FOREIGN PATE	NT DOCUMENTS	3		
	Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No
	EP 0 793 214 A1	Sep-3, 1997	€PO			
	EP 899 604 A2	Mar-3, 1999	-EPO			
	EP 1 083 539 A2	Mar 14, 2001	-EPO			
	- DE-201-09-354-⊎1	-Sep 13, 2001	Germany	-		No
	DE-299-09-537-U1-	-Oct-14,-1999	-Germany-	Carried and Advanced		-No
	JP 2001203919	Jul 27, 2001	Japan			Yes; Abstract only
	-WO-97/23860	-Jul-3, 1997	PCT			
and the same of th	W⊝-00/21067	-Apr13,-2000	PCT			
	-WO.00/67196	Nov 9, 2000	PCT			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
 Krantz, John H. et al., "Color Matrix Display Image Quality: The Effects of Luminance and Spatial Sampling," SID International Symposium, Digest of Technical Papers, 1990, pp. 29-32.
Messing, Dean S. et al., "Improved Display Resolution of Subsampled Colour Images Using Subpixel Addressing," Proc. Int. Conf. Image Processing (ICIP '02), Rochester, N.Y., IEEE Signal Processing Society, 2002, Vol. 1, pp. 625-628.
 Messing, Dean S. et al., "Subpixel Rendering on Non-Striped Colour Matrix Displays," International Conference on Image-Processing, Barcelona, Spain, September 2003, 4 pages.

Examiner	at Cl	Date Considered	8/25/05				
*Examiner:		ence considered, whether or not citation is in conformance with MPEP 609; draw line tion if not in conformance and not considered. Include copy of this form with next ion to applicant.					
Form PTO 14	49	Patent and Trademark	k Office - U.S. Department of Commerce				

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